Project Report: Basic Calculator Website

# 1. Introduction

The Basic Calculator Website is a simple and interactive web-based application developed using HTML, CSS, and JavaScript. The purpose of this project is to demonstrate the fundamental concepts of web development, including user interface design, event handling, and basic arithmetic operations performed on the client side.

# 2. Objective

The primary objective of this project is to create a user-friendly calculator that can perform:  
- Addition  
- Subtraction  
- Multiplication  
- Division  
- Percentage calculation  
- Decimal operations  
- Clear and backspace functionality

# 3. Tools & Technologies Used

|  |  |
| --- | --- |
| Tool / Technology | Purpose |
| HTML | To create the structure of the web page |
| CSS | To design and style the calculator layout |
| JavaScript | To handle the logic for operations and user interaction |
| Browser (e.g., Chrome) | To run and test the website |

# 4. Features

- Responsive and clean user interface.  
- Button-based input for numbers and operations.  
- Real-time display of expressions.  
- Evaluation of expressions using `eval()` in JavaScript.  
- Error handling for invalid inputs.  
- Clear and delete (backspace) functionality.

# 5. Code Overview

\*\*HTML (index.html)\*\*: Defines the structure of the calculator including the display input and buttons.  
\*\*CSS (style.css)\*\*: Styles the calculator with a modern and neat layout using grid and flexbox.  
\*\*JavaScript (script.js)\*\*:  
- `appendToDisplay(value)`: Adds button value to the input.  
- `clearDisplay()`: Clears the input field.  
- `deleteLast()`: Removes the last entered character.  
- `calculateResult()`: Evaluates the expression and handles errors.

# 6. Output

The output is a fully functional calculator in a web browser. Users can perform calculations by clicking on the buttons. Results are displayed in real-time, and the interface is intuitive and easy to use.

# 7. Conclusion

This project successfully demonstrates the development of a basic calculator using front-end technologies. It lays a strong foundation for more advanced projects in web development by covering the core areas of UI design and client-side scripting.

# 8. Future Enhancements

- Add support for keyboard input.  
- Implement scientific functions (like sin, cos, log).  
- Dark/light mode toggle.  
- Store previous calculations using local storage.